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Sustaining Social Innovation Enterprises through a Design Led Innovation Framework

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Constant changes in the global economic environment require companies to revisit traditional assumptions about how businesses create and capture value (Teece, 2010). In recent years, management practice literature has focused largely on better understanding business models and business model innovation (Amit, Zott and Massa, 2010; Johnson, Christensen and Kagermann, 2008). Much has been written on the benefits of linking *design* and *design thinking* to organisational strategies and business transformation. However, very little has been researched and reported on regarding the impact of design led approaches to triple bottom-line opportunities such as, social innovation enterprise.

In the context of this paper Design Led Innovation is defined as the tools and approaches which enable design thinking to be embedded as an element of cultural transformation within a business. Being Design Led requires a company to have a vision for top line growth founded on deep customer insights and expanded through customer and stakeholder engagements. The outcomes of this are then mapped to all aspects of the business, enabling the vision to be successfully implemented and achieved. It is the latter part of this definition where we believe Design Led Innovation has the greatest value in transforming social innovation enterprise into a sustainable business venture. However, we also acknowledge that enabling these firms to think strategically about their business model is difficult given the unique operational and funding challenges that often characterize many social enterprises.

The purpose of this paper, therefore, is to pose the question, do sustainable innovation enterprise innovate their business model? And if so, how? It is the authors' opinion that such enterprises only innovate at the product or system level without a complete understanding of

the business model structure, which underpins the long term viability. However, in this paper we challenge this notion and explore if such firms can overcome their size and operational constraints to become sustainable enterprises using a design led approach. This is achieved through contextualizing business model innovation, briefly defining social innovation enterprise and profiling a new and emerging industry in Australia – Clean Technology. Future research challenges and opportunities are also presented.

Context – Business Model innovation

Teece (2010) states that all businesses either explicitly or implicitly employ a particular ‘business model’. The ‘business model’ describes how the *value creation, delivery, and capture mechanisms* are employed. Osterwalder’s (2010) business model canvas visually represents the four areas (what, who, how, revenue), and nine building blocks (such as; customer segments, distribution channels, revenue flows etc) that should be reflected systemically in the business model. It is widely agreed that the notion of value is central to any business model (Teece 2010). This includes key elements such as value stream, value proposition, monetary and financial aspects, and aspects related to a firm’s exchange relationships (e.g., delivery channels) and competencies and activities (Chesbrough 2006; Teece 2010; Margretta 2002; Zott and Amit 2010).

There is no shortage of literature and opinions regarding the value of ‘innovation’ to a firm’s growth (European Commission, 2012a; Heskett, 2008; McKaskill, 2010) and long-term sustainability (European Commission, 2012b). Furthermore, there is a broad spectrum of understanding among industry and several academic communities surrounding the term ‘innovation’. Current literature in this domain encompasses multiple meanings, applications and approaches. Throughout the ‘innovation’ debates, however, one constant remains. That is, firms need to innovate beyond a *technology only competitive advantage* to an advantage that focuses on the *business model surrounding the technology offering*.

Several government programs exist in other countries to support firms in their journey to becoming Design Led. For example, the UK has The Designing Demand program (Design Council, 2008) and in New Zealand’s – the Better By Design Program. Such programs have constantly evolved over the last 10 years. Countries that have adopted programs such as these generally have targeted policy objective(s), designed specifically to stimulate innovation

activities in SME manufacturing and service firms. This is needed to ensure the SMEs have a longer term impact on the global competitiveness of their national economy. Positive results from programs such as The Designing Demand and Better by Design, highlight the significant impact design can have on a business's top line growth and overall economic outcome.

A central element of these programs is the repositioning of the firm's focus. Specifically, a repositioning from using design at an operational level – to – embedding design as a strategic driver for growth within the business. This requires a paradigm shift in thinking surrounding the role and value of design. It also requires the firm to consider not just the product and service characteristics of the idea (generally found through human centred design approaches) but also the value proposition and business model aspects of the concept adopted early in the design process. The ability to integrate both design process and business thinking into a single concept at an early stage in the design process generally requires firms' to undertake some form of cultural transformation. This is because design thinking and business thinking are often seen as opposing forces within an organisation and uniting the two requires a cultural shifts in business practices (Bucolo and Wrigley, 2011). While SME manufacturing and service firms have been observed to transform successfully, it is the authors experience that firms who best succeed in Design Led Innovation programs are generally medium size and have strong operational practices to support growth opportunities. Furthermore, developing a novel business model to capture the value from technologies is challenging for start-ups and established firms (Chesbrough, 2010).

When considering how Design Led Innovation programs or approaches can be applied to social innovation enterprise, it is important to note that key business fundamentals are often not present in these firms. This is because these firms are generally in the start up phase of their development. This is particularly relevant for the Clean Technology sector in Australia. This sector consists of several small technology led businesses and generally, firms of this profile do not have the absorptive capacity to adopt the approach from such programs. Or, they are ineligible to access the required funding of these programs (Bucolo and Wrigley, 2011).

Design Led Innovation

A businesses strategy that encourages thinking about products (or services) in new ways is often defined as “design driven innovation” (Verganti, 2008), “design thinking” (Beckman and Barry, 2008; Brown, 2008) or “Design Led Innovation” (Bucolo and Matthews, 2011; Wrigley and Bucolo, 2011). For Verganti (2008) design driven innovation is less about user needs or technological development and more about pushing a firm’s vision about possible new product meanings and languages. Verganti’s (2008) design driven innovation strategy centres on radically changing the emotional and symbolic characteristics of products and services. And he achieves this by gaining a deeper understanding of broader changes in society, culture and technology.

Beckman and Barry’s (2008) definition of design thinking connects Owen’s (1998) design model and Kolb’s (1984) seminal experiential learning theory. It centres on an integrated view of the process underlying design thinking in the organization. For Beckman and Barry (2008) design thinking requires designers to “toggle” between analysis and synthesis – effectively operating in both concrete and abstract worlds.

The “design thinking” model adopted by Brown (2008) centres on the notion that design projects pass through three spaces – inspiration, ideation and implementation. Central to Brown’s perspective is the idea that breakthrough ideas are inspired by a deep understanding of consumers’ lives and that design is then used to innovate and build value. Essentially, Brown holds a ‘systems’ view to innovation. The benefit of this view is that it accepts that in some instances innovation must account for vast cultural and socioeconomic variations.

Bucolo and Matthews (2011) define the design led innovation process as having a vision for business growth based around deep customer insights, then expanding the vision with customers and stakeholders in order to map the insights to all aspects of business. They developed a Design Led Innovation Framework (Figure 1) that allows designers to integrate the tools of their profession into the framework while relating to the company strategy. This framework relates well to Brown and Wyatt’s (2010) definition of the design thinking process as a system of overlapping spaces (opportunity, ideation – solutions, and implementation – competitive strategy) as well as Beckman and Barry’s (2008) design thinking cycle. Wrigley and Bucolo (2011) build on this, taking the “product service concept” approach to Design Led Innovation. They emphasise that central to this approach is the

notion that “the final solution is not presented as an artefact in isolation, but as an integrated product and service concept” (Wrigley and Bucolo, 2011 p.232).

Applying a Design Led Innovation approach is important because many companies do not understand their value or their customers’ value. One of the critical first steps of the Design Led Innovation framework is to build this understanding and to alter a firm’s vision about the ‘*meaning*’ and use of its offering to create growth and sustainable competitive advantage (Wrigley and Bucolo, 2012). Ultimately, the Design Led Innovation approach results in changes to the customer value proposition (Bucolo and Matthews, 2011; Verganti, 2008; Wrigley and Bucolo, 2011). In terms of customers, most firms have a limited understanding of what their customers *want*. Understanding the *want* is important for developing products and services, however, these tend to only to serve short-term needs. A Design Led Innovation approach provides companies with an opportunity to develop deeper customer understanding that goes beyond observation. From this fresh perspective new innovation opportunities are generated. These opportunities also allow the company beyond the product – to link with broader social values.

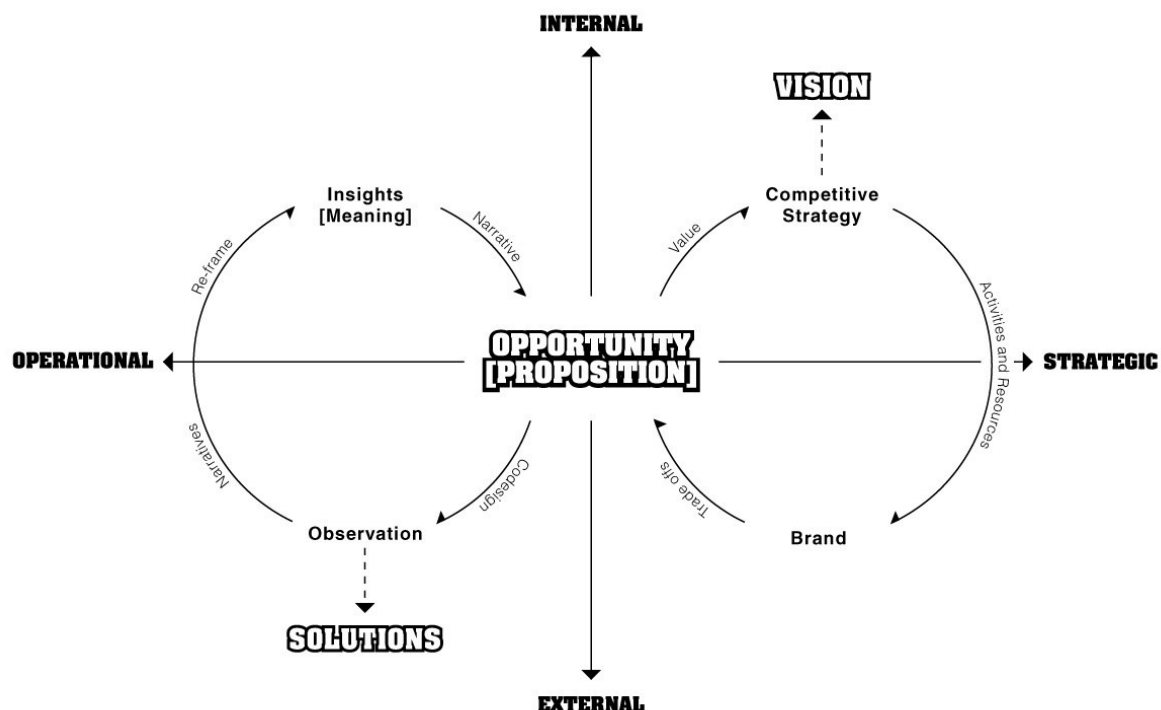


Figure 1: The Design Led Innovation Framework (Bucolo and Matthews, 2011, p.8)

The Design Led Innovation approach, centres on the fact that the value of a company can be derived from a clear understanding of its mission, vision and necessary activities to support

the goal. Critically, the statements that define the company must be generated from words that have meaning to both the staff and relevant stakeholders. It must be viewed as a "call to action" and a way of aligning core themes and ideals. Fundamentally, the application of a Design Led Innovation approach should be no different for a social innovation firm, or, *for profit* firm. Often, these two business types are separated, however, a move beyond this distinction is needed because every business should have a social dimension to it.

Social innovation enterprise

More and more businesses are adopting design thinking and design led innovation approaches to help them differentiate in the marketplace, innovate and bring products and services to markets faster (Brown and Wyatt, 2010). Increasingly, nonprofits have been observed leveraging the benefits of a design thinking approach and a new enterprise is emerging – *social innovation*. While there has been a plethora of research in recent decades surrounding innovation in business and science, very little is known or reported on regarding social innovation (Mulgan, Tucker, Ali and Sanders 2007).

Social innovation centres on “how communities and societies innovate new ways of meeting their needs” (Mulgan *et al.*, 2007; Mulgan, 2008, p.6) and it is not something that is unique to the non-profit sector. Brown and Wyatt (2010, p.32) emphasise that social challenges require “systemic solutions that are grounded in the client’s or customer’s needs.” While this draws parallels to a conventional design innovation approach, it is important to note that the competitive pressures are “blunted” or mostly absent in social enterprise (Mulgan *et al.*, 2007). Social innovation enterprise is broad and human-centered; it can be driven by many domains such as politics, markets, movements or academia (Mulgan *et al.*, 2007). While most social enterprises intuitively use elements of design thinking, many do not utilise it to move beyond the conventional problem-solving paradigm (Brown and Wyatt, 2010). Furthermore, social innovation enterprise is economically complex and as such, developing and growing new social models of business usually take longer than other sectors (Mulgan *et al.*, 2007).

Major social challenges face humanity such as energy supply, clean water, food availability and the environment. The pursuit of “Clean Technology” as a social enterprise provides a potential avenue for solutions to many of these challenges. Furthermore, design should play a role in the resolution of these potential outcomes. In Queensland, Australia, Clean

Technology companies generate more than AUD\$3.1 billion in revenue annually and employ approximately 12,500 people and create exports of products and services in excess of AUD\$125 million per annum (Queensland Government, 2011). However the majority of these firms are generally small in size, employing less than four staff. Typically they have been founded through a unique technology offering, with their focus being on the scientific validation of their results rather than developing the complete business contribution that the new technology offers the market.

This approach follows a distinctive pattern of social innovation enterprises, where Manzini and Rizzo (2011) note that firms who have a focus on social innovation should start ‘small’ and pilot their ideas within a specific region or context in the first instance. Due to the unique nature of many social innovation projects, this is a valid approach, however, given the resource constraints firms face in the Clean Technology sector – this approach has limitations. The challenge of adopting this approach is that when the technology is required to scale to beyond the regional pilot stage, the expanded value proposition and business model does not scale to match the global opportunity. Often, a completely new value proposition and business model is required and the work undertaken at the pilot stage is no longer valid. However, through the author’s research in working with several Clean Technology firms, an approach which allows these smaller firms to gain access to Design Led Innovation approaches, while continuing on their scientific validation has been developed and applied, with two initial positive outcomes. Firstly, the authors believe that through a structured method small firms can gain strategic value of a Design Led Innovation approach. Secondly, social innovation enterprises should be encouraged to think ‘large’ from the outset of their projects to ensure their ideas scale through the developed value proposition and business model, which is required to translate their technology to the broader community.

Future challenges and opportunities for the clean technology industry

A report by Ernst & Young (2010) exploring the mechanisms to finance emerging clean technologies in Australia highlighted that the clean technology industry is driven too much by “the science” and not “the economics”. As a result, there is “an absence of skills required to pitch ideas, technologies and products to early investors” (p.3). However, a major benefit of the clean technology industry is that it can have multiple applications across different markets and industries. The Ernst & Young (2010) report also highlighted that the industry is

challenged and also characterised by vast diversity of costs and time needed for research and development and very different technologies will often compete for the same market (e.g., hot water can be delivered by solar, heat pumps or shallow geothermal).

It is clear, that for the clean technology sector, innovative business models are needed urgently. The clean technology market is a long term transformation often occurring over a 10-15 year period. This poses many unique challenges such as a significant shift in the risk profile from pilot to commercial scale demonstration. As such the size of government grants and the associated ratio to private investment needs to be designed to support this transition (Ernst & Young, 2010). Using a Design Led Innovation Framework to propose future business model prototypes can help businesses to better prepare for many of these challenges. Most importantly it can help an otherwise technology (and science) focused industry to think more holistically about the realities of business. Without a viable and sustainable business model, the clean technology industry will only further increase the risk profile and deter investment opportunities. A further limitation of social innovation enterprise is that it is very broad and difficult to explore holistically. While the Design Led Innovation Framework is useful in determining (developing) potential business models, ultimately, one approach will not fit all situations. Each social sector challenge should to be addressed separately, different social industries cannot be measured equally and likewise the relationship with business is also different. This provides opportunities for further research and investigation.

A final issue relates to scale, more specifically how ideas can be scaled so that the value of the innovation can be realised. Too often in business pilot projects are undertaken and the goal of the exercise is to test the pilot. Often, however, the pilot is a success, but when the idea goes mainstream it is unable to be scaled, because many of the assumptions that underpin the idea fail (e.g., distribution, cost, manufacturability etc). Moreover, the business does not have the vision to fully support the concept. This is especially true in social innovation enterprise, for example in government trials of public sector innovation the funds to fully consider the bigger project from the outset are often not available.

The clean technology sector has also been observed to operate in this manner. Too often innovations are viewed from a single dimension such as the “product”. However, for true breakthrough innovation to occur, design for complexity is needed from the onset. This can then be scaled, through to a pilot project. Fundamentally, for the social innovation process to succeed an idea needs to prove itself in practice, this is why scalability through to commercial

pilot is critical. Once the pilot stage has been reached, the project has the opportunity to grow, be replicated, be adapted or franchised (Mulgan *et al.*, 2007). The result of this process is a new product or service as well as a transformed business. According to Mulgan *et al.* (2007) the ability to scale up social enterprise depends on two clusters of factors being in place. These include an environment that provides effective *demand* for the model (e.g., public agencies willing to provide commissions or contracts) and the *capacities* to grow (e.g., management, leadership and governance).

Concluding remarks

The proposition presented in this paper challenges the notion that Clean Technology firms, who form part of the emerging social innovation enterprise sector, do not have the resources to gain value from Design Led Innovation practices. Typically, the size and unique operational constraints of social innovation enterprise limit the capacities of such enterprises to scale from idea through to pilot (and subsequent functioning model). However, preliminary observations indicate that social innovation enterprise offers new and exciting opportunities for further research and development, particularly in regards to business model innovation opportunities. Embarking on future studies that seek to prototyping a Design Led Innovation framework would provide the first step in better understanding the way social enterprise can be transformed into sustainable product-service opportunities.

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